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ABSTRACT

A number of organizational communication analysts have argued that the field is in the midst of a paradigm shift, away from a strictly rational to a more transactional view of organization, but their arguments are not situated in a well-explicated communication theory. This paper argues for the existence of two, mutually exclusive worldviews of organization and communication, one heteronomous, the other autonomous. A heteronomous model views organization as responding to an environment and communication as the exchange of information. An autonomous model assumes organization to be generative of its own structures, through a reflexive process of self-production. The resulting "cell" of talk, in the autonomous model, is a conversation. The paper explores, through the mechanism of speech acts, the reflexive properties of human conversation, and its capacities to generate those relational properties that are associated with organization. The phenomenon of coupling and its organizational implications are briefly explored. The paper concludes with a brief consideration of how to revise organizational communication analysts' ideas about the conduct of communication research, calling for the building of a body of research that starts from a discourse-based accumulation in solid empirical studies. Includes 21 notes and 3 figures illustrating various aspects of organizational communication. Contains 84 references. (Author/RS)

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THE WORLDVIEW OF ORGANIZATIONAL COMMUNICATION THEORY: AUTONOMOUS OR HETERONOMOUS?

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Shifting from a heteronomous to an autonomous worldview of organizational communication: Communication theory on the cusp

Abstract

A number of organizational analysts have argued that we are in the midst of a paradigm shift, away from a strictly rational to a more transactional view of organization, but their arguments are not situated in a well-explicated communication theory. This article argues for the existence of two, mutually exclusive worldviews of organization and communication, one heteronomous, the other autonomous. A heteronomous model views organization as responding to an environment, and communication as the exchange of information. An autonomous model assumes organization to be generative of its own structures, through a reflexive process of self-production. The resulting "cell" of talk, in the autonomous model, is a conversation. Conversations are reflexive and self-organizing: they are produced by communication but are in turn the frame, or envelope, of the communication that generated them, in the absence of which communication would be impossible. They are the organization in the communication. The article explores, through the mechanism of speech acts, the reflexive properties of human conversation, and its capacities to generate those relational properties that we associate with organization. The phenomenon of coupling and its organizational implications are briefly explored. The article concludes by a brief consideration of how to revise our ideas about the conduct of communication research.

Introduction

Gareth Morgan (1986, 1993) has popularized the idea that the basis for our idea of an organization - our organizational ontology, if you like - is grounded in a metaphor. The logical foundation for this assumption is well known: Since an organization is conceptual, not physical, in its essence, in that we can never perceive it as an object through the medium of our senses, it is natural that we should construct it by imagining it to be something that we already know about, such as a machine, or a cell, or an organism, or whatever.

Although it opened up a new avenue for the understanding of organization, Morgan's influential book *Images of organization* (1986) did not try to link up the concepts of organization and communication. That connection has been made more recently by Smith (1992) who has reported on a re-

view she made of the literature on organizational communication, going back to the decade of the sixties. According to her findings, it once again appears that this literature has a figurative foundation, in what she calls "root metaphors." She isolates three distinct metaphorical strategies of linking organization and communication employed by theorists of organizational communication. The most common one - roughly three out of four - is that of a *container*: Communication occurs *in* or *within* an organization. People are already in an organization and that is where they communicate. The second of her metaphors is that of *production:* Either communication produces organization, organization produces communication, or both produce each other. Either, in other words, it is by communicating that the structures and processes of organization are generated, or, alternatively, the deeper realities of organizational life are manifested and reflected in its symbolic products through the medium of communication, or (the third variant on the production theme) communication (rhetoric) invents organization which then sets the stage for the practice of rhetoric (communication). Her third metaphor, although rarer in the literature, is that of *equivalence*: Communication and organization are literally the same thing, although seen from different perspectives, perhaps somewhat as, in linguistics, de Saussure, Chomsky and others have thought of *langue* and *parole* (or *language*, as exemplified in grammar, and *speech*), as being, respectively, the deep structural (or canonical) and surface dimensions of discourse (competence versus performance, in other words) .

Smith's system of categories is actually founded on an even simpler notion, that whenever we counterpose two terms, such as organization and communication, by supposing a relation to hold between them, we tend, following an elementary principle of perception, to make one of them a figure (that to which we direct our attention) and the other a ground (out of focus, perceptually). Thus, when we center our inquiries on such phenomena as superior-subordinate relations, or the processes of socialization, we are making the assumption that the background, which is to say the organization where these processes are occurring, is sufficiently well established and uncontroversial that we can take it for granted. If we have been, as a discipline, questioning this manner of proceeding lately, as Smith's article seems to indicate, it is because this "taking for granted" of a non-communicationally grounded organization is more and more unsatisfactory, intellectually: It is vulnerable to the claim of reification, it says nothing about the roots of organizational stability and change, it obscures the dialectic of structure and process, and, since the appearance of Morgan's book, it is all too visibly an arbitrary mental construction based on unclear evidence. Belief in the naive functionalism on which this view is based, and all its cousins, has become harder to sustain.

The alternative is to suppose that the relationship of communication and organization is not that of foreground to background, but one taking the form of a connection that is much more dynamic: Either organization produces communication, communication produces organization, or both.

The idea that organization produces communication is a common theme in the literature on organizational culture: The artefacts generated by the particular culture that informs a certain organization are the residue of its communicational practices (and indeed the communicational practices themselves - such things as company rituals - may be thought of as a product of organization). While this is an interesting development in many ways, it still does not come to grips with the issue of where organization comes from to start with (other than as an outgrowth of communication, that is), or indeed what organization is, ontologically speaking. To address this latter question, as communication scholars, we should have to reverse the figure-ground polarity, by asking not how organization produces communication but how communication produces organization. Instead of **organization --> communication** (communication within organization, or reflecting it), we should have **communication --> organization** (communication generates organization, or simply is it). This second possibility poses an order of questioning to which, as Smith observes, no real answer has been forthcoming. It is the question to which this paper is addressed.

Smith's speculations are part of a much wider questioning of the ontology of organization. Karl Weick's (1969/1979) insistence on using the term "organizing" rather than "organization," for example, springs from his curiosity as to the dynamic foundations underlying the structuring of cooperative work, the ontogeny of organization and environment. Unfortunately, the concept of communication on which his work is built - a "double interact" - is far too impoverished to explain much of how organization comes to be (Taylor & Robichaud, 1992). In France, Crozier and Friedberg (1977) have been wrestling with how to comprehend within the bounds of a single theory the dimensions of individual autonomy and the systemic imperative, again without a clear communicational basis. The recent popularity of Giddens' (1984) work on structuration is motivated by a similar impulsion to reconcile system and structure, but while I find much in his work with which to agree, the theory of communication on which it is built remains insufficiently unelaborated to explain how communication could be the operational basis of organization. Lincoln (1985) has been trumpeting a "paradigm revolution" in organizational thinking but, again, its basis in communication remains obscure. These are only a few of the signs of dissatisfaction with the received wisdom on organizations, but, although they all recognize the centrality of communication, none of them is *based* in communication theory.

One theme in this literature is worth emphasizing, however, since it underlies the whole line of argumentation that is to be developed in this paper, namely that the evolution that is occurring in our ideas of organization - our metaphors, models or "ideal types" - is not just cumulative; there is a genuine break, a discontinuity between the premisses of our older way of thinking, and our new (which is why Schwartz and Ogilvy (1979) and Clark (1985) are led to see what is happening as an instance of paradigm shift). This is not just a matter of degree, of more or less (of bureaucracy, or of rational management, for example), but of a difference in kind. It is this perception of sharply contrasting ways of seeing and thinking, where one is not just a variant of the other along some agreed-upon dimensions (such as degree of hierarchy, or complexity) but a genuine inversion of some of our most established ideas, that I am arguing for in what follows. I take the disjunction to be rooted, metaphorically, in Smith's dichotomy: the transition from *organization* ---> *communication*, to *communication* ---> *organization*. Each of these are frames of understanding, that I call *worldviews*, and each makes very different assumptions about what communication is, what organization is, and how they relate to each other. The sharply divergent views of *organization* cited by Schwartz and Ogilvy, and Clark, are correlated with contrasting, and irreconcilable, views of what *communication* is (or perhaps, to put it more strongly, they are just the same distinction expressed two different ways). The first of these is what I will be calling a worldview of *heteronomy*, the second of *autonomy*. The paradigm revolution in progress in the organizational sciences is, I believe, founded in the discovery that there are two worldviews, one heteronomous, one autonomous.

If, as I think Smith's paper demonstrates, the field of organizational communication research is marked by a deeply rooted ambivalence as to origins (communication first, organization first) then it will be necessary to go beyond the intuitive insights of Morgan to explore our ideas, not just about organization, or the link between organization and communication, but about communication itself. At issue is our ontology, not merely of organization, but of communication.

I have my own hunch as to where the difficulty lies. The theoretical tradition we have inherited in communication theory was marked from the beginning by the notion that communication is about individuals producing messages. This conception was rooted in theories of the forties and fifties, when communication as an academic field began to emerge, and when behaviorism, sentence-centered linguistics, cybernetics (Shannon's monograph being particularly influential) and functionalism were all in flower. Each of these theories encouraged a focus on communication as a *local* phenomenon. Larger units of communication than an elementary speech unit could only be imagined

inductively, as a derivation of individual acts. The kind of globalizing, holistic perception of communication that people such as Malinowski and Mead had been reaching towards in the generation before got lost from sight, and even anthropologists such as Hall and Birdwhistle became particularistic, especially in their methodologies. The outer limit of a systemic perception of human communication was the timid adventure of the Palo Alto school in the sixties into a description of family dynamics. This is all very well but if we have no solid conception of any *communicational* unit larger than individual speech then it follows that we also have no intrinsically communicational container within which to situate observed communicational behavior. Reliance on a container metaphor that goes beyond communication then becomes inevitable. It is a fall-back position (no wonder it is, as Smith reports, the dominant view). The only possible solution researchers had available to them was to postulate a *non-communicational* entity which was already, for historical reasons, available to them, namely an organization.

So, ironically, we arrived at the anomalous position where communication researchers who would balk at buying into an idea of a transcendent *communicational* reality on the grounds that there was no operational basis for it would nevertheless accept unquestioningly an equally abstruse idea, namely that of *organization*, for which there is no empirical evidence either. I think it more plausible to conceptualize an over-arching communication universe that I call a *conversation*.

The rationale I propose for this basis is borrowed from the organizational theory of self-organizing systems. From this theory it takes only a single step to show that, under an assumption of *conversational* autonomy, organization may be generated by communication (i.e., communication --> organization) while, under an assumption of heteronomy, organization would be thought of as external to communication, and controlling it (i.e., organization --> communication). The difference then is how we conceive of reality beyond the immediately perceptible. In organizational communication we have no choice but to make *some* assumption of transcendence but, as Smith shows, we do have an option open to us as to *which* attribution we make. It is towards the explication of such an option that my entire argument is addressed.

The structure of the paper is as follows: first, using principles borrowed from Maturana and Varela, I describe an alternative idea of organization from the conventional input-output view (which is what I mean by heteronomous). In this theory, the basic unit of organization, a cell, is indeed a system of production, but its "output" is itself (i.e., it is autonomous). The manufacture of

the cell is internally, not externally, driven, and, as a result, the cell is self-focused: Its environment is a source of disturbances, not of information. In Weick's terms, its environment is enacted.

From this initial perception of the self-organizing properties of interaction, I then pose the question as to whether the same self-focused property may not be claimed to be characteristic of communication. Might there not also be "cells" of talk (conversations, in other words), and might these not be the building blocks of organization? The critical step in such a demonstration is to show that communication is reflexive, which is to say that the products of conversation are self-constitutive: The presuppositions that are the foundation of communication are already implied in its productions. To show this self-generating side of conversation, I draw on the theory of speech acts, and secondarily on Goffman and ethnomethodology. Having argued for reflexivity, I then extend the argument to consider briefly the dynamics of interaction between such assumed cells of self-organizing talk and their environment: What Varela calls "coupling surfaces." Finally, in the concluding section, I describe what I think to be some of the implications of this theoretical development for organizational research and analysis.

It is obvious that in such a broad-brush treatment of a very complex question, namely self-organization, many loose ends are left, and much remains to be done. Nevertheless, the issue is of such importance to our field, that it is better, I think, to get started, however rudimentary the essay.

The ontology of organization: Autonomous versus heteronomous paradigms

The ontological problem that the concept of organization poses is that an organization differs from concrete objects of apprehension in having no properties that can be directly apperceived by the senses. *Organization* is a concept that is entirely abstract in kind, and thus our perception of the object it describes is typically filtered by the intermediary of a metaphor. We shall now consider two such metaphors of organization, or paradigms, that differ from each other in significant ways that are relevant to the development of our argument.

The heteronomous paradigm of organization

One way to conceive of an organization (the usual way, I think, in the systems literature concerned with information and control) is to image it as a structured entity coupled to an environment. The internal structure can be pictured as a network composed of nodes which process matter, and information, following a regular plan. The network itself exhibits regular patterns of interconnection, although they may vary depending on the nature of the activity being performed. The whole is

a production system, which takes *inputs* from the environment, and, depending on its structure, generates *outputs* to the same environment. The *inputs*, although primarily physical, are also information-bearing and the system can be thought of as exhibiting a structure which is in some sense a representation of the environment: a homomorphism is involved. The adequacy of its representation indexes its degree of adaptation. When the environment changes, so must the structure, if it is to remain adapted, and this change is called "learning." (How such a system in fact "learns" remains less than totally explicated in the literature, notwithstanding a spate of recent books on the issue.)

Where the organization is human, the nodes can be thought of as people, their activities as tasks, and their interconnecting network as a hierarchy of functions and controls. A hospital, for example, uses a variety of externally-furnished resources, including technology, to treat patients, who are its primary output (unless we also count the waste it disgorges in the form of used material and pollution). Its internal organization can be thought of as a set of routines designed to apply resources to resolve the problems of the patients it takes in (the classic description of this general idea of work as routines is to be found in March and Simon, 1958, Ch. 6; a more focused characterization of hospital work in the same spirit is that of Strauss et al, 1985). What makes the hospital "organized" is the structuring of the relations of the multiple components that compose its base.

This is a model of organization which can be termed *heteronomous* in that it assumes that the organization's *control* is external in origin, in the sense that its patterns of response are driven by inputs from an environment, and must be adapted to the latter, through its outputs. It is contingent. Its performance is measured by its efficiency, or its productivity. At the limit, this model of organization is equivalent to a simple machine and, indeed, human organization has sometimes been so imaged (Gerth & Mills, 1958; Mackenzie, 1978; Mintzberg, 1979; Morgan, 1986). This is how organization appears from the outside, to an observer. The organizational experience is objectified.

The autonomous paradigm of organization

In sharp contrast with this first, heteronomous, view of organization, a second, or *autonomous*, vision has been proposed, particularly by two researchers, Maturana and Varela, whose work originated in biology (Maturana & Varela, 1980; Varela, 1979/89) but is now also recognized as also relating to the field of cognitive science (Maturana & Varela, 1987; Varela, 1989; Varela, Thompson & Rosch, 1993).

An autonomous organization is characterized first and foremost by operational closure. Operational closure is exemplified when, for example, a cell emerges from the undifferentiated "molecular soup" which composes its basic building material (Varela, 1979/89, 21). The emergence is a result of its self-reproductive activities. A reflexive loop is involved. It is the existence of a cellular wall which provides separability and thus makes possible the manufacture of molecules by the cell, but the wall is itself self-generated, being composed of molecules produced by the cell. The cell is busy constructing itself. There is, in other words, a chicken and egg conundrum posed here: The cell factory, in the absence of which there could be no cell manufacture, is nevertheless of its own making. Only in this way could it have taken shape against the background of otherwise homogeneous molecular interaction. No outside agency need be postulated - no exogenous deus ex machina - and indeed none *can* be, since no one has come remotely close to explaining the immense variety of species in the world as a purely environmental effect. The generation of identity, in all its variety, these researchers believe, comes from within the world of the organism, not without. They term this self-structuring capacity *autopoiesis*. The whole thrust of the theory behind it is to demystify what must seem at first reading a logical antimony, an end without a beginning.

When a body produces itself, the *results* of the productive process (i.e., the components of the body) are indistinguishable from the *agents* of production (which are also components of the body). The usual distinction separating producer from product, and input from output, ceases to have any meaning, since the producer is a product of its own production. The system is reflexive; it is its own object.

Similarly, the notion of a distinct starting point or outcome for the productive process loses its sense: The operation is iterative, with neither beginning nor ending (or rather the beginning is indistinguishable from the ending), yet the behavior is coherent and the organization distinctive. It is just that the coherence is distributed throughout the endlessly repeated cycle of reproduction, rather than being a property of a finite input-output sequence. The properties of the organization are, as we have said, emergent, in that they need not be explained as an intervention by an outside agency, or "environment."

This is not to deny the system/environment contrast. Indeed, the reason we recognize an organization to begin with, obviously, is because of the system's capacity to distinguish itself from its background. Only by an act of distinction that makes it stand out against a context can an individual or a society affirm its identity. For the organization to be seen to exist at all, there must be a boun-

dary dividing the larger system of interactions in which the organization is sited into an *inside* and an *outside*. But, following the same logic as before, the distinctive characteristic marking off an autonomous system is that the boundary is self-generated: a membrane created from within by the process of self-reproduction. We need not suppose the intervention of an extrinsic designer.

Such boundary-establishing membranes, since they are constructed out of material common to all, do not totally isolate the organism from the world outside, nor make it insensible to the latter's patterns of change; it is just that external events do not have the status of *inputs* to a productive process dominated by the logic of the environment. Instead, the logic of an autonomous system is self-referential. In an autonomous system, the network of interrelated production processes operates to regenerate the network that produced them, and in so doing to engender, once again, its own organization. The influences from the environment take the form, not of inputs, but of *disturbances* that, because they upset the balance of the established stasis of the network, have to be compensated for, in order that the organism continue to maintain its identity, and its autonomy. But though it is sensitive to environmental disturbances, the organization remains focused on itself.

Coupling

The central issue differentiating an autonomous from a heteronomous paradigm of organization is our conceptualization of *coupling*, or the link between organization and environment.[1]

It is obvious (and it is a point I have already made) that, even to be able to speak of an organization at all, there must be a difference between the unit of organization, or the system, and its context, or environment. At a minimum, we must be able to distinguish two different systems of interaction, each having a certain degree of independence, so that, while there is an interconnection linking the two, there is nevertheless also a distinguishable boundary separating them. Whatever our ontological starting point, we assume the unit and its surroundings to be joined at certain points, so that there exists a coupling *surface*, permitting an interplay of influences from one to the other. The "issue" raised by the autonomous/heteronomous distinction, to which I referred above, then boils down to how, in either view, we conceptualize the coupling which links the organization to its environment.

One approach, associated with conventional systems theory, is to see the internal *states* of the system as being transformed by an input from the environment. A typical way to represent such a coupling is to show it as a mapping, or function, **f**, such that

f: T x I x S ---> S

(where T stands for time, I is a space of permissible inputs, and S is a space of the possible states of the system).

Visually, we have an input-output system[2]:

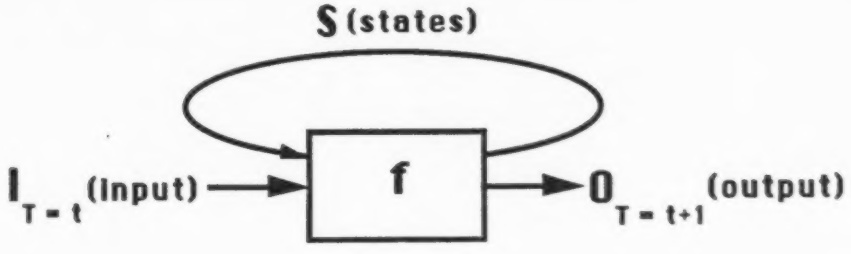

Figure 1. An input-output characterization of organization

Here, the concepts of both independence and interdependence are clear, in that the inputs are one determinant of the subsequent states of the system (making for *inter*dependence), while, on another plane, the transition is also dependent on the prior internal states of the system (there is thus also a degree of *in*dependence).[3] This is called "coupling by input," and it is the paradigm of heteronomy, in that the behavior of the system is, in part at least, directly *controlled* from the outside. It can literally be programmed through the determination of its states.

As opposed to coupling by input, if we make the assumption that the system is autonomous, there is a second concept of coupling. Here, the states of the system are not directly affected by external influences (and hence it is inappropriate to speak of an *input*). The system is described differently:

f: T x S ---> S

(where, as before, T is time, and S the space of the states of the system).

Visually, we have:

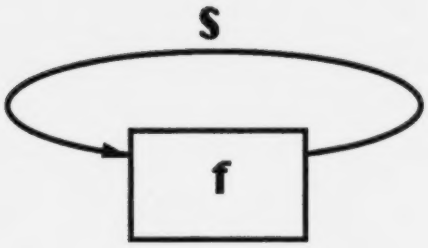

Figure 2. The organization conceived as an operationally closed system

Such a system, being operationally closed, will function in continuous fashion until it is disturbed (such a disturbance, incidentally, may result from an internal source, not only from the environment). The effect of such a disturbance is to *indirectly* influence the behavior of the system by altering its environmental parameters (and not directly, through its states, as in heteronomous control) in the direction of a new internal configuration and dynamic:

$$(\mathbf{f} + \Delta\mathbf{f})\colon \mathbf{T} \times \mathbf{S} \dashrightarrow \mathbf{S}$$

(where we assume that **S** is a space enlarged to include such new states as may be specified under the new transformation $(\mathbf{f} + \Delta\mathbf{f})$).

Here it is seen that the system is responsive to external conditions of the environment (in that it will change its behavior when it is disturbed), but it is not controlled by them. While it has mutated into a new configuration, the latter is not predictable on the basis of our prior knowledge of the states of the external environment. The system generates its own variety, internally. The system moves to maintain its internal *coherence* by altering its behavior but the dynamic of change is self-generated. It is not programmed from the outside.

A disturbance then is to be clearly distinguished from an input: An input is an integral part of the *definition* of the system, a disturbance is not. An input has a *deterministic* effect, a disturbance does not, since the manners of occurrence of a disturbance are potentially infinite (and not, as we have said, necessarily dependent on the state of the environment, since the disturbance may result from internal sources). What makes a system autonomous is its capacity to retain its organization, within limits, *in spite of* disturbances (as the structure of its organization evolves).

Under this conceptualization, the "organization" can be thought of as a concatenation of processes which produce the components of the system that, in turn, reproduce *it* (Varela, 1979/89, 45); the

nature of the organization is determined by its relations, however, independent of the identity of the components that generated it - the structure linking the components and not the components themselves. When it changes as a result of environmental disturbance it is the structuring of the relationships that is undergoing evolution. The outer limit of the deformations that its internal structure can cope with through internal reorganization of its network of relationships, without loss of identity of the cell as a functioning entity, determines its ability to continue to survive as a viable organizational unit (not to die, in other words, in an environment that has otherwise become hostile to it).

Relations between autonomous units in a larger field

It is possible, under some circumstances, for viable larger units to form, composed of elements that are individually autopoietic. Within the larger field of observation, each of the systems taken individually may be thought of as a source of disturbance for its neighbors, and vice versa. Providing each of the parts is capable of maintaining its identity, a form of coupling has then been produced which is communicative, even though information is not exchanged (in that information presupposes input, a point I will develop more fully later). A composite system may result, where each of the individually self-organizing parts is subordinate to the environment created by the presence of the others, and such composite systems may be stable. At this point the difference between autonomy-retaining coupling and coupling by input may indeed be indistinguishable to the outside observer. The point of view adopted by the latter will then determine what order of system he or she discovers.

The epistemological commitments of a worldview

The epistemological question is *How do we know an organization?* The answer we get once again depends on the perspective we start from.

The heteronomous view

If an organization's outputs reflect its adaptive response to environmental inputs, the procedure to follow in developing an idea of its structure is in conformity with the experimental method: vary (if possible, systematically) the inputs, observe the resulting outputs, formulate a hypothesis as to the intervening functions, and test the hypothesis by a repetition of the input-output sequence until reasonable certainty has been attained (Ashby, 1956, chapter 6). Attributions are causal in kind (if for the most part correlational in method) in that they assume that a given input leads in time to an observable output (typically measured either as performance or satisfaction).

The autonomous view

The operational method, with its attributions of causality, has been taken, from the middle of the nineteenth century until quite recently, to be *the* scientific approach, in the social as well as the natural sciences. Against this dominant ideology of science, there has, nevertheless, persisted another, non-operationalist view. The contrast is exemplified in a distinction, developed in reaction to the growing influence of positivism in nineteenth century social sciences, associated with the names of Droysen, Dilthey, Windelband, Rickert, (Hughes, 1958; von Wright 1971), and most prominently Weber (1904/1949), namely between explanation of a causal nature (*Erklärung*) and understanding based less on the search for causes than on a quest for purposes (*Verstehen*).[4] The distinction can be understood as a relation of the investigator, or observer, to the system he or she is trying to comprehend. If the system, ontologically speaking, is driven by its inputs, then it is a reasonable strategy on the part of the researcher to note the temporal sequence of inputs and outputs, and to try to correlate them. This is positivism; its goal is prediction. The researcher or designer is in a subject-object relationship with the organization in question. If, however, the system is assumed to be self-organizing, in the manner I have described above, then such a research strategy is seen to be predicated on a false assumption, and cannot produce reliable results. The "laws" of behavior will remain obscure, not because, as any experienced researcher knows, the connections are always going to remain empirically numerous and causally tenuous but, rather, because the task was ill-conceived to begin with. If Nature (which in the social sciences means human organization) is not governed by immutable laws, then the search for those laws is, by definition, futile, even nonsensical. Instead, the task of the observer is to develop understanding, through an intuition of the dynamics of the system of concern, always knowing that the "understanding" is a researcher-generated construction that is acceptable if it seems to work - and nothing more. It is certainly not guaranteed to be a veridical description of an underlying causal logic.[5]

The alteration of perspective from an assumption of heteronomy to one of autonomy thus has a radical implication. If a system functions on the basis of operational closure, then, even though it reacts to disturbances in its environment, it does so on a principle other than that of responding to external command. Its reactions are not, in fact, driven by instructions from without, it cannot be programmed, and, in spite of its sensitivity to external stimuli, the notion of "information" has no precise meaning: Once we abandon the notion of input and output, the idea of information flow loses its sense (Varela, 1979/89, chapter 8). Any interpretation we have of the regularities of its behavior, from the outside, must refer back to its internal dynamic only, and cannot be based on an

assumption of functionality, with respect to an external environment. The main premises of functionalism are laid aside as irrelevant to inquiry.

The researcher as autonomous system

These same considerations apply to the organizational dynamics of the cognitive system of the investigator. If the nervous system, as Maturana and Varela believe, is itself predominantly self-organizing, then the descriptions it formulates are best thought of, not as representations of the environment constructed out of information about it, but as symbolic constructions which follow the logic of an internal dynamic - responsive to disturbances emanating from the environment, but not coupled to it in a relationship of input to output. The "goodness" of a system of explanation is to be judged not on its putative truth value, but on its *viability* - does it make effective behavior possible? It is computers, asserts Varela (1979/89), which function on the basis of information storage and extraction, and not the human brain. When we renounce the idea of a brain as a system for dealing with information, by means of an algorithm, the concept of *representation* (in the sense of a more or less objective, and accurate, description of the environment) also loses its relevance. The result is a bracketing of objectivity (Varela, 1979/89, 217), and a break with conventional "scientific" procedure.

The closure of a system brings forth a world: We are enclosed in a world of meaning from which we cannot escape. We are related to the world outside in the same way we are to a mirror: a mirror reveals to us only that it is *possible* for us to be and to act as we do, and that, hence, our experience is viable (Varela, 1979/89, 31). No "operational" method will ever rescue us from our enclosedness. Our perceptions fold forever back on themselves; they are given to us by our common inheritance of human, and socially situated, beings. As long as our explanations work, that is all we can hope for. As C.S. Peirce put it in his rejoinder to Descartes, we cannot control our own doubt. Doubt, in an autonomous worldview, is merely the effect of a disturbance.[6] The ideal of objectivity as the progressive elimination of error by successive corrections is, as Varela sees it, a chimera. There is a fundamental limit to our comprehension of our world, and of ourselves.

Varela is not arguing for unregenerate solipcism. In his analysis of the dynamics of perception, he admits the reception of stimuli originating in the outside world. It is just that, proportionally, the greater - indeed, much greater - part of cortical stimulation is self-generated. We do not just register an image of the outside world; instead we construct a perception, actively, using internally-generated processes of imaging and what we "see" is what we have thus constructed.[7] What makes this

way of perceiving the world work is that, whatever reality is *really* like, it doesn't matter as long as our image of it allows us to function with assuredness, as, for the most part, is the case. The supplementary advantage of such a system is that it allows for a continuing generation of internal variety, and thus for creativity, originality and the construction of intellectually-rich artefacts of thought, and hence for the multitudinous cultural variations in the human experience of a common world that we discover as we voyage from one society to another over the surface of the globe. What may at first glance seem a limitation of rationality, and a reluctant admission of the relative nature of knowledge is, in this larger context, a strength, not a weakness, in that it is out of variety that adaptiveness, and the capacity to innovate, are born, not out of uniformity.

In this perspective, the understanding of organization, and communication, that is possible on the basis of systematic research, is to be judged, not on habitual criteria of reliability and validity, but on whether it is plausible, convincing, and seems to lead to satisfactory results! Nothing else. How this gets decided depends in turn on the dialogue that goes on within the research community. As Peirce argued, our search for certainty is always framed by our relationships of social interaction.[8]

The communicational basis of organization

I have now explicated what I take to be two contrasting views of organization, but only in terms of organization theory. In the section that follows, I turn to consider the implications of the ideas I have been developing for the communication theory of organization.

The heteronomous view of communication

The most common way to model communication, since the classic monograph of Claude Shannon (1948; Shannon & Weaver, 1949), has been to conceive of it as a network, where the nodes are interpreted as people (or their information-processing surrogates) and the links are seen as channels for the transmission of signals from one location to another (in this it can be seen that the heteronomous view of communication starts from the same assumption as the heteronomous view of organization described earlier - unsurprisingly, since both draw for their inspiration on the same version of system theory).

The signals are thought of as conveying information, in that there is assumed to exist a coding system, accessible to the components of the network, which maps a given configuration of signals onto a lexicon of messages, thus permitting the exchange of syntactically structured, and semanti-

cally interpretable, symbolic patterns. The nodes of the network are both sources of information, and destinations. Repeated transmissions, involving a sequence of nodes, result in information flows through the network. Information may originate outside the network, entering the latter as an input, and may exit from it as an output. The individual nodes may, in turn, serve, not just as relays, but may operate on the data they receive to generate new patterns, thus adding to or subtracting from the variety of information within the network. It is this latter capability that leads to a conceptualization of the nodes as information-processors, comparable in kind to, if greater in complexity than, computing machines. The structure of the network may itself vary, depending on circumstances, following a logic which may or may not be deterministic: Stochastic variation that takes account of heterogeneous nodal behavior is possible. It is therefore cenceivable that both the network and its components may be programmed, and controlled, from the outside, if an error component is included to take account of unpredictable variation. Information flows can now include instructions on how to do the work. What makes the work "organized" is the existence of a common plan of work, within which each element of the task is complementary to the others. While such "plans" may arise spontaneously, they may also be imposed. The system is thus heteronomous.

The autonomous view of communication

An autonomous conception of communication views it, not as a network, but as a conversation (Taylor, 1988, 1990, 1993a, 1993b; Taylor & Giroux, 1993; Taylor & Van Every, 1993). Conversation is an interactive flow of discourse, involving multiple participants in quasi-synchronized alternation of verbal and non-verbal expressions. It is, as ethnomethodologists such as Sacks, Schegloff and Jefferson have shown, organized into patterns of exchange which are guided by heuristics that sufficiently approach rule-governed behavior to qualify, possibly, as conforming to a syntactics of conversation (Sacks, Schegloff & Jefferson, 1978; Schegloff, 1968; Schegloff, Jefferson & Sacks, 1977; Schegloff & Sacks, 1973). There are ways to get into and out of episodes of talk, ways of seizing and relinquishing the floor once in, ways of determining who will be the next speaker, and so on. In and of themselves, however, such sequences have no meaning; they add up to verbal interaction, and nothing more, as we become immediately aware when, by chance, we are thrown into a situation where people speak a language we do not understand. We perceive the dynamics of the interaction, and can guess at its protocols, but the sense of the talk which is accessible to the participants remains out of our reach. To take on meaning, conversation has to be seen differently, as a medium for the accomplishment of human transactions.

Transactions, as they manifest themselves in conversation, are characterized by two dimensions that have been denominated (Austin 1961; Searle 1969) *locutionary* and *illocutionary*. A locution is equivalent to what we are accustomed to thinking of as a statement, or assertion, that describes a state of the world. It incorporates a proposition, which predicates something about one or more objects (which are the arguments of the proposition, in logic) such as a state or an action. Locutions may then be qualified as "true" or "false," depending on whether what they assert about the world holds or does not hold in fact.

An illocution must be thought about quite differently. Austin (1962) observes that although the ordinary statements making up conversational interaction have usually been thought of as describing a state of affairs in some world, truly or falsely, it is nevertheless easy to find examples (such as "I bet you five bucks the Sox take the pennant!") which *instate* a reality (the bet is on) and do not merely *describe* it. All speech, Austin concludes after reflection, is fully as much *performance* as it is *description*. It is this "performing" dimension of speech that leads him to postulate a characteristic he calls the "illocutionary force" of a statement. The achievement of an illocutionary effect is equivalent to the performance of an act *in* saying something (which is why it has force, and why Austin designated it a speech *act*) as opposed to the act *of* saying something (which is what we usually think of as the meaning of the statement, or its content). Referring to an outside world (locutions) pertains to the domain of semantics; illocution belongs to a different sphere, pragmatics (Bierwisch, 1980). It is the incorporation of illocutionary force in a statement that makes it possible to praise people, to warn them, to make promises, to authorize their actions, to ask questions and give information, to announce a verdict and pronounce a sentence, to decree and to decry, proclaim and declaim: in a word, to instate and reinstate the multiple variants of human relationships, which supply the context that must be present if interaction is to be successfully carried on.

It is important for the development of my argument to note a further fundamental distinction between a unit of talk thought of as a locution, as opposed to how we must think of it when it is seen as an illocution: The making of a locution is the feat of a *single individual*; the accomplishment of an illocution requires *cooperation involving more than one person*. The ongoing conversation that accompanies and enables cooperative work is thus not just a support to cooperation - a facilitator, in other words (that would be a strictly locutionary perspective), it is *in and of itself* an instance of cooperative endeavor (once we take into account the illocutionary dimension of talk). It is in this distinction that the whole notion of self-organization resides.

I take it to be obvious that the making of statements is something people can do without assistance (you just talk); it may be less self-evident why the conveyance of illocutionary force must be cooperative. To see why this must be so, it is necessary to look a bit further into Austin's characterization of a speech act. Figure 3 shows what I take to be the main elements of his theory.[9]

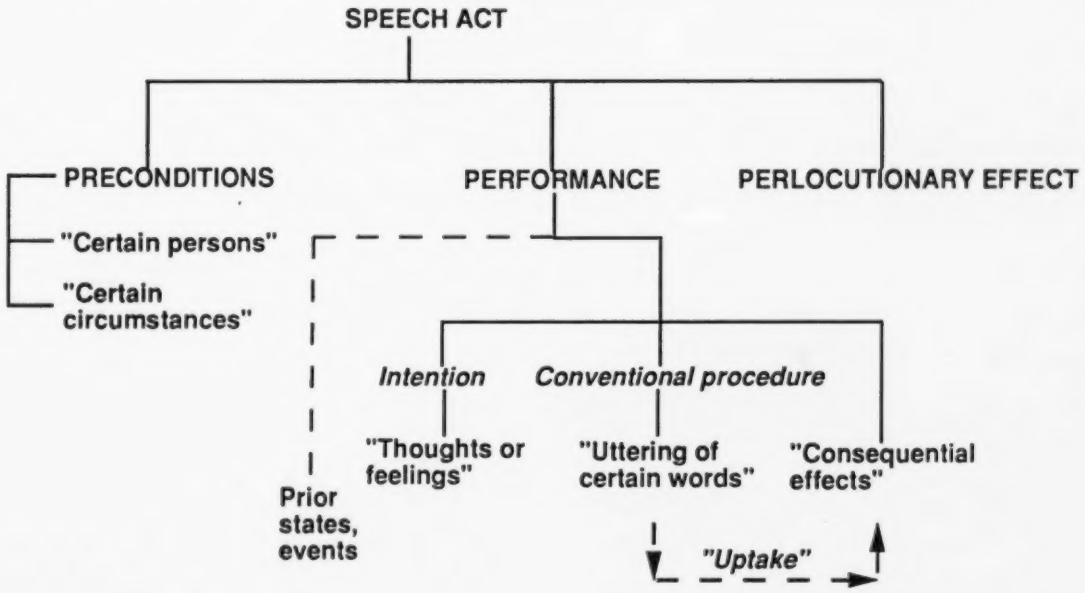

Figure 3. The constituants of a speech act, as I interpret Austin.

We note, first, a distinction between the *preconditions* of a speech act (the branch to the left of the tree shown in Figure 3), and its actual *performance* (the center branch), where the latter is assumed to be motivated by certain thoughts and feelings and to issue in the execution (by the initiator of the exchange) of a *conventional procedure* (speaking grammatically, to begin with, in that the mastery of the syntax of a language or another code is assumed, but also comporting oneself according to the conventions of normal interaction, for the given circumstances, appropriate to the attainment of a certain end). By "preconditions" we mean certain socially determined qualifications that include the identity of the people involved, the time and the place where the action is occurring, all of which would normally be indexed by features of dress, décor, setting, etc., and which go toward composing a *situation*. Identities, in this sense, are not just personal markers, such as Jane and John, but also take the form of such socially-determined factors as professions, statuses, roles, etc. There is, in other words, a correlation between the nature of the act which is to be performed, the identity of

the people involved in its performance, and the social situation where it occurs. The meaning of an act is determined only in part by the specifics of its actualization in behavior, the remaining part of the meaning being presuppositional in character. We are already half way to figuring out the illocutionary sense of an act when we have identified its preconditions, even before the performance occurs.

All performances have a context. In addition to the preconditions already mentioned, we need to know something about the siting of prior action in which the performance occurs (that we show as a branch terminating in "prior states and events") because it is this context of previous activity that informs the intention behind the performance, which is to say, the thoughts and feelings of the speaker. We always react to *something*.[10]

Finally, the performance of the act and its uptake by a partner in interaction is sufficient to produce a *perlocutionary* effect, which is to say a resulting state of the relationship (and thus a precondition for a subsequent exchange where the new "prior states and events" have been fixed by this exchange). Speech acts are not isolated performances, but components in an ongoing interaction.

The key here is complementarity. Given its dependency on situational variables, the meaning of performance can never be by itself conclusive, in isolation, out of context (and why illocutionary force is the product of an exchange, as we have stated). Supposing you are in conversation with someone who says "I think the door is open." Is this merely an innocent statement of fact? A question that is phrased as a statement, to which you are expected to supply a confirmation or disconfirmation? A hint for you to get up and close the door? A comment on someone who has just left the room? An expression of relief on a hot day? Think about how much additional knowledge you are expected to bring to the situation to make sense of your interlocutor's seemingly trivial observation (from the point of view of its objective reference to a certain state of affairs): Is this a person who hates drafts? Is this a person whose status qualifies him or her to request a service of you? Is this a person who customarily uses indirection in their speech? Is this a hot day or a cold (and thus would the door be open or closed, usually)?

There is a fundamental difference in the interpretation of a statement taken out of context and then subjected to semantic analysis (as, for example, the above illustration might be in an introductory linguistic textbook illustrating how a generative-transformational grammar works) and in its interpretation in a normal conversational context, where you are in co-presence with another speaker - and where the latter's meaning is not necessarily transparent because the situation is communicating

a sense fully as much as the manifest content of your own spoken intervention (Barwise & Perry, 1983).

Neither partner to an exchange is in a position to determine unilaterally the force (and hence the full meaning) of an intervention by either one of them. The illocutionary force of a statement is only partly a function of the speaker's intentions, reflecting imperfectly the latter's thoughts and feelings; it must also be attributed to what Austin calls the *uptake* of the performance by the person to whom it is addressed. Only when we have seen the consequential effect of speech are we (the participants) in a position to say positively what the illocutionary force has in fact been: it need not have been transparent to start with. Suppose you got up and closed the door, assuming this is what had been meant, with the result that the other felt obliged to then say "Oh, I'm sorry, that's not what I meant at all. I didn't mean to bother you. Actually, I was rather appreciating the draft." Has this solved the problem of the meaning of the original intervention? Not necessarily. It may still be the case that your conversational partner really did want you to close the door, and is now trying to annul the implication that he or she was thus making a claim to status, especially if there was a sense that the latter might produce friction. The uptake mechanism is still engaged, as it always must be.

Furthermore, the speaker may him or herself be less than certain of the illocutionary force of his or her own intervention into the ongoing talk. It may be that there was no terribly clear intention lurking behind that initial observation we have just been describing and that it was just blather which, without meaning to, produced a consequential effect that had not, strictly speaking, been intended (or at least not consciously). There is absolutely no reason to believe that people are always perfectly aware of their *own* intentions in speaking: They get caught up in the dynamics of interaction. They make put-downs that they subsequently, with credible sincerity, insist were never meant as such. They pass compliments that they are astonished to discover taken as such. They make promises they never intended to make (and indeed claim they never made). The literature on sexual harassment is a veritable goldmine of ambivalent intentionality, as we have witnessed in some recent, well-publicized cases that the media have feasted on. Illocutionary force, it seems, is *a property of the transaction and not of the statement.*[11]

This property needs further explanation since it is here that we come to the crux of the matter of conversational self-organizing: how acts of speech take on meaning of a kind that is not referential in the usual way (and why illocutionary meaning is different from locutionary).

Meaning

Meaning arises when there is a correlation between what is said, and the state it refers to and expresses.

As a *locution*, speech is correlated with a state of affairs outside the conversation. It has a point of reference that can be taken to be objective. It indicates what is, or has been, or will be, an external state of affairs. It is a representation that is semantically interpretable as the description of a situation or event beyond the closed world of the conversation. This is meaning in the common use of the term. From the heteronomous worldview of organization, we would say that the state of the conversation produced by a locution, in the context of an act of speech, reflects an input, based on someone's perception of events. Communication in the heteronomous view is taken to be an agency for the information of one person by another.

As an *illocution*, however, speech has no outside reference other than the conversation itself. Considered solely as an illocution, and abstracting for the moment from its locutionary dimension, an act of speech can have no meaning independent of the conversation; its meaning only becomes clear with reference to the context created by the exchange. Acts of speech both aim to, and do, produce an effect (called 'perlocutionary') on the person to whom they are addressed, but the effect has to be jointly negotiated in interaction, and is not simply "transmitted" from a sender to a receiver, or a source to a destination. A speech act is not a message.

Following the same logic, meaning is always in the process of being established retrospectively. The initiator of the exchange does not have the liberty of selecting what the illocutionary force of the act will be, but is obliged to try it on, in the hope that the other's uptake is confirmatory (because, if it is not, the actual illocutionary force will not have been what was intended). This is not how we have usually thought about communication, as a heteronomous phenomenon, but is how we *must* reason if we are to grasp the autonomous view.

Practically speaking, the dependency of an act on its conversational context, for the determination of the meaning of the act, implies that the basic unit, or component, of conversation is not a statement, but an exchange, which is itself composed of complementary interventions, much as a complex sentence is composed of individual phrases. The existence of such a contingent unit of talk has found ample empirical confirmation: in standard conversational analysis it has been called, among other terms, an "adjacency pair" (Schegloff & Sacks, 1973; Goffman, 1976; Coulthard,

1977; Schegloff, 1977; Pomerantz, 1978; Atkinson & Drew, 1979; Goodwin, 1979; Jacobs & Jackson, 1979; Benoit, 1980; Edmondson, 1981; Wells, MacLure & Montgomery, 1981; Owen, 1981; Van Dijk, 1981; Houtkoop-Steenstra, 1988). Questions combine with answers, assertions with agreements, requests with compliance, and so on. The natural unit of a conversation is an exchange.[12]

Since intervention taking the form of a speech act *aims* to orient the character of the exchange, of which it is an integral part, or proper subset, the "reference" of the act (to use the conventional terminology) is the larger transactional unit. But this larger unit forms the functional matrix of the acts that go to make it up: as we have seen, the meaning of the exchange resides in the transaction and not in the contributing acts. Nevertheless, from the illocutionary perspective, each individual act has a reference (and hence a meaning); following Austin's logic to its conclusion, it must be the overarching transaction! Thus the part refers to the whole, i.e., its meaning is synecdochic. However, since parts are less than the whole, the reference has an inevitable hypothetical quality - it's less a statement than a prediction, or an aspiration. The meaning of the exchange cannot be fully expressed in statements (locutions) such as those that are found in conversation but only in statement sequences capable of communicating narrative meaning - a story. But even then, the story is not the transaction, but merely a version of it, seen from only one of its possible participant perspectives (Taylor, 1993a). A reflexive loop is involved.

The reflexivity of conversation

In my introduction of Varela's ideas on autonomous organization, I began by describing his notion of the cell as a factory which must manufacture itself if it is to retain its identity. This is the autopoietic property, and it is fundamental to self-organization. What I now propose is that human conversation also manifests this same property, and hence that all human interaction, because of its conversational character, is fundamentally self-organizing. To demonstrate that this is so, all we need to show is that conversation can be seen as reflexive in character. Our discussion of the roots of illocutionary force provides us with the necessary elements for such a demonstration. We have drawn a distinction between preconditions and performance (Figure 3). Both are constitutive of relationship, but in different ways, and it is in the "difference" that reflexivity is to be found.

The preconditions to a speech act define a situation which is composed of, among other factors such as time and place (which are themselves socially constructed), a mesh of interlocking identities: doctor/patient, judge/advocate, professor/graduate student, cop/motorist, waiter/diner, boss/-employee, batter/umpire, etc. (as the batter/umpire example illustrates, the relationship gestalt need

not be made up only of couples; the baseball situation includes pitchers, catchers, fielders, a manager, an owner, a crowd, television cameras, sports commentators, an audience and so on). Let us refer to a particular situational configuration as the *deep structure* of the speech encounter. We can think of it as framing the exchange.

The interaction that follows serves to instantiate a situation thus conceived, in the same manner that, in standard linguistics, a *token* stands in relation to a *type*. We have already seen why: Because a performance in a speech situation is not fully self-defining, and relies on properties of context in order to take on meaning, it follows that the presuppositions that conversational partners bring to an exchange are in part determinant of the outcome. The preconditions are thus, to some extent, self-confirmatory. Every ball game is unlike any that has ever come before; yet, every ball game is like every other, all the way back to Abner Doubleday - a fixed point in a flowing stream.

On the other hand, as any competent magician (or con artist) knows, people's perception of the situation can be manipulated by controlling the dynamics of the exchange. The "preconditions", in this case, need not be fixed in advance of the exchange, temporally, but may be an outcome of it.[13] The meaning of a performance is predetermined, in part, by "certain persons" in "certain circumstances," but those same "certain persons" and "certain circumstances" are simultaneously an *effect* of performance as well as a *condition* for it. We know this is how it must be: How else would we be able to identify people, and social situations, except through our participation in speech performances?

While we focus on the encounter, we admit the preconditions that frame it. On the other hand, the exchange is constitutive of a situation, in the same way that language is constitutive of its grammar, or a dish is constitutive of its recipe. Different levels of reality are involved.

This property of the logical distinction of the levels of deep and surface structure can be illustrated by the fact that what appears to be, at first glance, a disconfirmatory encounter, for a given situational presupposition, may nevertheless constitute a positive reinforcement of the postulated relationship. A successful arrest made by a policeman confirms his or her identity, it is true, but sometimes so does a failure to complete the arrest (indeed the law is such that the refusal to allow oneself to be arrested can be interpreted as conferring per se a criminal status on the part of the recalcitrant interactant, and hence once again confirming the status of the lawperson - the Rodney King phenomenon). The effect we are alluding to is similar to that illustrated by the old chestnut "Have you stopped beating your wife?" where, whether you answer "yes" or "no," you confirm the presuppo-

sition that you had actually been beating her.[14] The reflexive effect in both cases comes about because of embedding of levels, sometimes referred to as "metacommunicational" (Watzlawick, Beavin & Jackson, 1967).

What we have been describing is a production process, sustained by an interaction involving communicational partners. Their separate contributions, in the form of speech acts, are components of collectively generated exchanges, that in turn contribute to the making of a transactional construction which, although its basis is symbolic rather than material, is nevertheless very real, a "cell" constructed of talk. It is in at least one sense similar to the spider's web, not just in being a self-generated environment for the organism that has spun it, but in its resemblance to a network. Through their conversation, people construct relationships that together constitute the links of a structure that *is* a network - a network composed not of physical channels for the transmission of signals, but of transactions which, as they unfold, leave a residue of continuing obligations and commitments joining members into a working cooperative system (Taylor, 1993a). The autopoietic view of network is thus dynamic, not static: something to be constantly regenerated through interaction. It is a structure, to be sure, but a structure of relationships. And, fully as important, the *identity* of the people involved is tributary to the unfolding of the interaction process even though it is they who form the material basis for the manufacture of the symbolic molecules out of which conversation is made. As we have seen in discussing Varela's theory, the productive components are simultaneously their own main product. Outside of conversation, people have no identity at all that counts as social; outside of conversation, we revert to mere animal status. Even the primates find their identity in social exchange, mediated by acts of communication. Nobody can confer identity; it has to be found in interaction. It is one of the reasons a conversation *is* a conversation.

An organization is not a physical structure - a collection of people (or computers), joined by material channels of communication, but a construction made out of conversation. We support it by our talk, but we do not unilaterally define it, or design it; it had to have been there for us to enter into (because we would otherwise not even exist as social beings), and it will continue when we leave it, however much our leaving may shock it and lead to its transformation.

The relational substructure of speech, once established, thus tends to be resistant to change, whatever the surface flow of talk, and is certainly not programmable: Programs structure surface performances, not presuppositional bases. And nobody can determine the identity of people from the outside; whatever the job description says to start with, the reality will always be emergent.

The conversation within which speech is situated (and in the absence of which speech would have no meaning at all) thus constitutes a kind of membrane, where the "molecules" are made of symbolic matter and the "walls" of the conversation have been constructed out of them - through the performance of speech acts.[15] The existence of the cell simultaneously establishes 1) the conditions for the production of speech acts and 2) the speech acts themselves: The "preconditions" that are a prerequisite to their production are themselves self-generated through speech acts. There must be a speech situation to make the production of speech possible, but a speech situation is necessarily produced by speech. Conversation is thus autopoietic, in just the sense that Maturana and Varela specify: It literally produces itself. And since, I think, organization is conversation, organization produces itself: it is operationally closed.[16]

The "coupling surface" of a conversation

We have been concentrating our attention until now on the existence of internal self-organizing mechanisms operating within the framework of conversation. The import of illocutionary force, I have argued, is to create a relation. Such relations may take the form of commands (requests to perform acts), assertions of authority (statements that are accepted), assumption of an obligation (promises to do something in the future), entering into a contract (oaths to love and honor), and so on. The relations of work, I have said, are mediated by speech acts, which are such things as promises, assertions, questions, commands, praise, criticism and everything else that goes to make up the family of illocutions. The result is a structure. This is the internal organization of the conversation: a set of relations, independent of the components out of which they are constructed, and an assurance, for as long as the relations are maintained, of continuity, and survival. It is produced through conversation, and is a prerequisite to it.

But if a conversation is a cellular structure, with its own identity, then there must be, logically, an inside and an outside, and a boundary which connects them. There will thus be what Varela has called a coupling surface, and the conversation will be influenced by the circumstances of its environment. The "environment" in question, if we are to respect the logic of this view, will be composed of the same kind of material as the "cell" itself. In other words, a conversation exists within an environing context of symbols, or, more specifically, of talk, which it influences and is influenced by.

The heteronomous view of organization would view such influences as taking the form of information. The clerk, for example, listens to the client's order, and responds, depending on the con-

tent. The order functions as an input. It is informative. The output is driven by the input, mediated by a program.

An autonomous view assumes that the client's "order" is not an informative input, but a disturbance. But how are we to interpret the concept of a "disturbance"? What, within the context of a conversational theory of organization, do we mean by "disturbance"?

It seems to me that the elements of a response to this question are to be found in Winograd and Flores (1986, 27-37). They argue, as I have in this paper, that language as speech cannot be understood outside of its context of production (a property they call, citing Heidegger, "thrownness": " ... the condition of understanding in which our actions find some resonance or effectiveness in the world").[17] We are always in the 'throes' of acting, our involvement is highly personal and subjective, the outcomes of our interventions are never totally predictable, our understanding of the situation is at best partial and fragmentary, we do not so much objectively represent a situation in mind as interpret it, and language itself is a form of action, not of abstract idealization or pure thought. People are always responding - and here is where we rejoin the interrogation on disturbances - to "breakdowns." A *breaking down*, for Winograd and Flores, is not the kind of cataclysmic event the word might seem to connote. Instead, the term is used to mean any kind of unreadiness which is a justification for the focusing of our attention so that we bring to bear sources of knowledge which are relevant to the situation now presented to us. The world of reality is given to us, not as a compendium of objects and properties that we can inspect, and classify, at our leisure, but as present events that need attending to, and which mobilize our capacities to respond, in the here and now. It is what Winograd and Flores, following Heidegger, term *present-at-hand*, and our resources for coping are best thought of as a *readiness-to-hand* of resources. The meaning of things, for us, is fixed by the context of action in which we are engaged, just as the meaning of a hammer emerges when there is some kind of breaking down, or *unreadiness-to-hand* : "In sum, Heidegger insists that it is meaningless to talk about the existence of objects and their properties in the absence of concernful activity, with its potential for breaking down." (Winograd & Flores, 1986, 37).

A rather more down-to-earth version of the same idea of experiential immediacy lying behind the use of language can be found in the writings of contemporary linguists. Jackendoff (1972), for example, observes that in every sentence there is a noun phrase functioning as *theme*, and the other parts of the sentence, including the verb, serve to specify a set of thematic relations around it.

Halliday (Kress, 1976) similarly notes the organization of the clauses of a sentence into theme and non-theme, or *theme* and *rheme*. A theme is equivalent to that which is already taken as a given, or part of the interactants' joint already-acquired experience (the preconditions of an act, including the "prior states or events" of Figure 4), and the rheme is the addition the speaker is making. In every case, the theme functions to draw attention to a central object of attention, and the rheme is a comment on it - part of the new, not the given. To relate this to Heidegger's idea, the theme points to that which needs attention (*The door which is open*, in our earlier example) and thus indexes a certain "unreadiness-to-hand" which motivates the statement that follows, the rheme.

What this suggests is that, in an autonomous theory of organization, disturbances ("breakdowns") are not a sometimes, exceptional circumstance leading to crisis, but *a necessary condition for the maintenance of organization*. It is disturbances that permit the organization to display its variety, and thus sustain its viability, at least until the disturbance becomes so great that the organism has no possible behavior in its repertoire that is viable, and dies. As Winograd and Flores argue, to look at the behavior of managers at work as people who rationally solve problems and make decisions on the basis of available information concerning the states of the environment leads to uninteresting, and implausible, results. Instead, they see managers as imposing their own understanding on events to create distinct alternatives which they already know how to conceptualize, and which can serve as a pretext for action, thus imposing a definition of the situation which provides a sufficient justification for responding: "The relevant question is not whether it is 'true' or 'false' that there is a problem, but what commitments are generated (for speaker and hearer) by the speech acts that created it, and how those commitments generate the space of possible actions." (Winograd & Flores, 1986, 147)[18]

The coupling surface linking a conversation to its environment is thus composed of language. All that distinguishes the one from the other is the existence of an "inside" and an "outside" language. What makes a language inside is the sharing of certain ways of formulating locutionary constructions and communicating illocutionary force that are sufficiently distinct from those on the outside that their repeated enunciation is sufficient for the members of the community to recognize their authenticity. It is through the mastery of a specialized language (or dialect), and an entry into the collective domain of knowledge thus opened up, that we are permitted to join a conversation. Once in, we are gradually woven into its tissue of relations, through our obligations and commitments, but it is the commonality of the language that identifies the conversation. By the same token, the "foreignness" of the ways of speaking of someone who tries to infiltrate the group is enough to

disqualify him or her, and to result in exclusion or rejection. The mechanism which, Varela (1979/89) argues, underlies the human body's immune system thus appears to have a social equivalent.[19]

The fundamental limitation of older approaches to the study of language and logic (and, unfortunately, communication) derives from the habit of basing analysis on single statements (or messages), stripped of their context.[20] This has led to an analysis of locutions that is restricted to their referential functions, in abstraction from their conversational framing. Yet even the purest example of a "naked" locution, an assertion or statement of fact, is also, as Austin perceived, a speech act that invites confirmation or disconfirmation on the part of the conversational partner. A conversation is not just a succession of disjointed individual productions, in alternation, but knits together to make a much denser fabric, where one intervention is woven with others to make a structure of talk. Statements contribute to the making of that relational structure fully as much as any other kind of speech act. External stimuli, in this perspective, are not informational inputs each demanding a separate response, but an incentive to recreate the patterned system of knowledge shared by members of the community. Like workers anywhere, the stimuli are a pretext for showing, once again, one's skill in reproducing the artefactual constructions typical of that particular group.

Complex conversational structures

In simple societies (those that we used to call "primitive"), the people who cultivate a conversation commonly occupy a specific geographical location and spend most of their time interacting with each other. Like the parts of a human cell, the sphere of their comings and goings is spatially delimited, and unique to them, and they share a consciousness of a collectively interdependent common fate. The dividing line between "native" and "foreign" is crystal clear. It is easy to imagine the boundary of their shared world of talk.

Complex human societies, such as our own, are not so tidy. Individuals are involved in multiple conversations, and have often mastered more than one language of interaction. Furthermore, the conversations are no longer quite so spatially bound, nor temporally circumscribed, as in simpler societies. Sometimes, it is true, the boundary between "inside" and "outside" is clear: Nobody could attend a conference of software developers, or of sociologists, or of bureaucrats, for example, without fairly quickly becoming aware of an opaque wall of jargon separating the washed from the unwashed. Similarly, ethnographers and sociolinguists such as William Labov and Rom Harré have described how urban gangs of youngsters make language into a shared code that is impenetrable to outsiders. The boundary is not always, however, so evident. Even though, in large complex

organizations, it often happens that distinct conversational systems co-exist without friction through a kind of multiplexing, in that they share almost no coupling surface even in contexts of relative physical contiguity, things may not work out this simply: there is, in some cases, a strong interaction between systems of conversation that are individually self-organizing, and distinct from each other in their main characteristics, thus heightening the risk of conflict. Whether such combined entities may in turn also be considered autonomously self-organizing depends on the tightness, and the compatibility, of their coupling (Weick, 1976, 1979, 1982, 1985). And that, in modern society, in turn depends, among other things, on the adaptiveness of individuals as they migrate from one conversational universe to another, in the course of their daily life - not quite, it is clear, the same context as Varela and Maturana were considering in their study of biological processes.

Even in biology, however,we are warned by Varela (1979/89), once you enter the larger field of interaction of complex systems, the distinction between autonomous and heteronomous becomes problematical. It is here that we need to remind ourselves that what we have been discussing is a question of worldview (the Observer's, that is). The difference between one worldview and the other, between a vision of human organization as either heteronomously or autonomously organized, is not what Nature brings to its encounter with the scientist, but what the scientist carries to his or her meeting with Nature. The situation, I think, is roughly analagous to that which confronts physicists in that for them also whether matter is in essence *really* wave or particle depends on how they elect to measure it. Nature seems to be amenable to either interpretation; only the human being is troubled by the apparent inconsistency. Similarly, whether we choose to study organizational communication as a networked flow of information-bearing messages, or as boundaried configurations of talk, has to do with our theoretical predilections and our training as researchers, more than it does with the empirical facts of the case. Whatever we decide, Nature joins the game.[21] The point is: Were we even conscious there was a choice? Did we even understand there was an issue of worldview? And if not - if our tree of knowledge was always bent in the same direction - were we missing out on something?

Conclusion

I have developed an argument for the existence of contrasting worldviews in this paper. Since the heteronomous view is well-established and needs little explanation my attention has been centered on the idea of autonomous organization. I have explained autonomy in two steps. First, I recalled the main principle underlying the theory of self-organization: The instrument of production, and the product, must be identical. The cell, Varela argues, is continually engaged in reproducing itself.

The matter of which it is composed is shared with the environment; but what distinguishes the cell is the coherence of its internal composition of relations. It is in this way that boundaries are created. The maintenance of such coherence, confronted with disturbances, may necessitate periodic internal rearrangements, but these serve to sustain the identity of the cell, not to "adapt" it to its environment. In this view, the notion of "information" ceases to be meaningful.

Applied to human organization (my second step), this becomes conceptualized as self-organizing cells of talk, or conversations. Conversations are not just random verbal interaction, but have an underlying social structure, or relationships, involving a set of identities, and situated circumstances. The talk people engage in both expresses these relationships, and regenerates them. Whenever the conversation is disturbed (people leave, people join, extraneous events intrude), the conversation reflects processes that work to restore internal coherence (possibly migrating, in the process, to a new state). While such conversations are embedded in a larger environment of talk, they nevertheless exhibit patterns of local self-maintenance, so that outsiders' talk is typically treated as a disturbance, and "foreign" patterns of talk are actively rejected as alien. The immune system of the body thus has, it is postulated, a conversational analogue.

If Smith (1992) has discovered, as she seems to have, that the field of communication is undergoing a progressive, if gradual, shift away from the extreme heteronomous models of social science that once dominated the field to a more autonomous view of the objects we study and the approaches to inquiry we favor then it will be important to consider the practical implications of such an evolution. These appear to me to be of two orders, ontological and epistemological.

The ontology of organization

The classical theory of organization made the assumption, following the dictates of a heteronomous worldview, of a single logic, and one system of coordination and control. It is true that the effects of differentiation, and the accompanying reality of more locally organized communities sharing a similar way of seeing and talking, were recognized (March & Simon, 1958; Lawrence & Lorsch, 1967). Nevertheless, there was also an assumption that the dysfunctional consequences of specialization could be compensated for by more effective mechanisms of integration - the logic of the field of studies known as "organizational development." The presumption of essential unity need not be contested, whatever the empirical deviations from it.

The acceptance of an autonomous worldview of organization makes this way of thinking highly problematical, and the continued maintenance of global coherence in large, complex organizations very much a question of empirical investigation, not of axiomatic presupposition. The image we are left with is closer to that of Weick (1985): absence of a single over-riding rationality, segmented rather than monolithic structures, stability that is locally rather than globally determined, tight coupling in some areas and loose elsewhere, typically high residual levels of ambiguity in every relation other than those supported by frequent and comfortable interaction. The appearance of unity is largely an illusion, fostered by company propaganda. Beneath the surface, the reality is not so much organized as self-organizing.

The plausibility of this scenario has become very much enhanced by the pressures of globalization, and the emergence of what is now coming to be called "postmodern" organization (Clegg, 1992; Crook, Pakulski & Waters, 1992; Taylor & Van Every, 1993). As Crook et al point out, the organization of professional work is taking on a very different shape from the pattern of classical bureaucracy, closer to what Waters (1989) calls a "collegial structure." For this pattern of organizing, the premiss of autonomy begins to appear rather plausible.

For the communication researcher, this assumes a rather different starting point for inquiry than has often been the case, with its typical emphasis on established hierarchies.

The epistemology of inquiry

Perhaps the most telling impact of an acceptance of the autonomy thesis on the evolution of communication studies will be on the agenda, and the practices, of research. I perceive the most exciting fall-out to be the kind of question that now is opened up for inquiry. New light is cast on some old areas of research. Supervisor-subordinate relations, for example, appear different when we think of them as constitutive of organization, and not merely reflective of it. Socialization has a different meaning in this new context - learning to "talk right." Managerial decision-making also requires re-examination if we think of it, not in functional terms, as a "rational" response to an environment, but as an illustration of the mechanisms by which internal coherence is maintained in a closed community of discourse.

To accomplish this, field research in naturalistic circumstances, idiographic in its emphasis, will be even more salient than it now is, but, in addition, we will need to develop new instruments for the analysis of discourse if we are to show, rather than take for granted, how organization is con-

structed through conversation, how boundaries of conversation can be recognized, and how individually self-organized communities of discourse are coupled one to the other. This will lead to a new emphasis on the phenomena of stability and change. Organizational research will find it imperative to integrate into its modes of analysis the models and methods of discourse and conversation analysis - fields that have previously evolved in their own fashion. This will require a broadening of the objectives of those latter fields, as they are now constituted, to take account of the institutional moorings of talk - a sensitivity to the macro as well as the micro dimensions of talk that I do not find in them as they stand.

The challenge of consolidating two areas of communication research which attack the description of human communication from contrasting points of view, one macro (organizational), the other micro (conversational) - opening up a new dimension of interdisciplinarity, within our own field - will evidently require both intellectual flexibility and conceptual imaginativeness. I believe the immediate challenge, however, is to begin to build a body of research that starts from a discourse-based accumulation of solid empirical studies. I am not at all proposing the abandonment of the nomothetic goal of saying something significant about the general field of organization, but I do believe we will only get there by first undertaking a much finer-meshed analysis of the data than we have yet acomplished.

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[1]In organizational theory, Weick has written extensively on coupling (Weick, 1976, 1982, 1985; Orton & Weick, 1990). We will return to consider the organizational implications of Varela's ideas at the conclusion of this article.

[2]We also, from this conventional perspective, assume a second function, **g**, and a set of outputs, **O**, such that **g: T x I x S ---> O** represents the next-output function (cf. Arbib, 1964). Since the output dimension is not a component in the argument being developed here, I have chosen to omit it from the text.

[3]The "independence" is relative: With the advent of computers, it is clear that the internal states may also be programmed from the outside.

[4]Positivism never had quite the same attraction for German sociologists as it did for French and English, and the reaction to it found expression in a series of writings, beginning with Dilthey in 1883, to be followed by a manifesto spoken by Windelband in 1894, articles by Rickert, also in the decade of the nineties, and culminating is reflections by Weber at the beginning of the twentieth century. The debate can, however, be traced back further to the contrasting positions of Hume and Kant, whose respective writings prefigure, in important respects, the contrasting views of organization as either heteronomous (Hume) or autonomous (Kant). The issue, it seems, sometimes seems to vanish from view for a time, but it doesn't go away.

[5]Social science research in the post-World War II period was dominated, almost to the point of exclusivity, by an operationalist view of inquiry. In recent years, however, the trend has been reversed, and we have witnessed a rebirth of interest in approaches to research that might quality as Verstehen in spirit. These newer schools of thought masquerade under a number of appelations, including constructivist, interpretive, qualitative, naturalistic, ethnographic, ethnomethodological, ideographic, etc.. For a discussion of some differences within these discourse-based approaches see Taylor & Gurd (In press).

[6]*The irritation of doubt is the only immediate motive for the struggle to attain belief. It is certainly best for us that our beliefs should be such as may guide our actions so as to satisfy our desires; and this reflection will make us reject every belief which does not seem to have been so formed as to insure this result. But it will only do so by creating a doubt in the place of that belief. With the doubt, therefore, the struggle begins, and with the cessation of doubt it ends. Hence, the sole object of inquiry is the settlement of opinion. We may fancy that this is not enough for us, and that we seek, not merely an opinion, but a true opinion. But put this fancy to the test, and it proves groundless; for as soon as a firm belief is reached we are entirely satisfied, whether the belief be true or false ... We think each one of our beliefs to be true, and, indeed, it is mere tautology to say so.* (Peirce, 1877/1955)

[7]One of the most convincing intuitive supports for such a view, other than the physical evidence, is the universal prevalence of dreaming: even when the outside channels of reception are closed down for the night, the internal system goes on uninterrupted.

[8]*Unless we make ourselves hermits, we shall necessarily influence each other's opinions; so that the problem becomes how to fix belief, not in the individual merely, but in the community.* (Peirce, 1877/1955)

[9]I have made one addition that is not in Austin's original description, namely the dotted branch that terminates in "prior states and events". The motivation for this addition should become evident later. It is perhaps necessary to say a word on my use of Austin. Austin's theory is not, as such, an instance of autonomous arguing. He is, rather, a transitional figure, in that he was the first, in a heteronomous tradition, to signal the importance of thinking of communication as action, not just transmission of meaning. I develop his ideas here because I think the theory of speech acts illustrates more clearly than any other the phenomenon of reflexivity, on which my entire case rests. The

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"missing" branch in speech act theory, as I see it, is precisely the on-goingness of conversation. My reasoning starts with Austin, then, but does not remain there. The addition is also influenced by my perception (Taylor, 1993a) that the structure of a speech act and a simple story are isomorphic, providing we take account of the existing states arising out of previous interaction. All stories are initiated by an event (Prince, 1973); so, I believe, are all acts of speech. Such "events" are merely, from another perspective, that of autopoiesis, disturbances. They trigger self-organizing sequences. As I say, this is a theme to which we will return.

[10]Cf. Werth (1993): *A **discourse** is a fusion of a **text** and its relevant **context**. The discourse participants go into a discourse-event with a certain amount of 'baggage' which we shall refer to monolithically as K, the propositions constituting a person's knowledge base. Which of these propositions count as 'relevant' in the context is defined by the text, in this sense: the text itself consists of a set of propositions P. But these propositions have many notional links with other propositions which are unexpressed, but nevertheless present. ... All of these notional links, then, constitute, at the start of the discourse, areas of 'potential relevance' to the propositions of the text, and as the text proceeds, some of these areas are actually activated by the text, while others are disactivated. Notice that, for the listener at least, the whole process is **discourse-driven**, while for the speaker, the discourse is the sole means by which the context (s)he wishes to construct may be conveyed.* (pp 50-51, emphasis in the original).

[11]Cf. Goffman (1967): *Every person lives in a world of social encounters, involving him either in face-to-face or mediated contact with other participants. In each of these contacts, he tends to act out what is sometimes called a line - that is, a pattern of verbal and nonverbal acts by which he expresses his view of the situation and through this his evaluation of the participants, expecially himself. ... The term face may be defined as the positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact. ... The person's face clearly is something that is not lodged in or on this body, but rather something that is diffusely located in the flow of events in the encounter and becomes manifest only when these events are read and interpreted for the appraisals expressed in them. ... While his social face can be his most personal possession and the center of his security and pleasure, it is only on loan to him from society; it will be withdrawn unless he conducts himself in a way that is worthy of it. ... Felt lack of judgmental support from the encounter may take him aback, confuse him, and momentarily incapacitate him as an interactant. His manner and bearing may falter, collapse, and crumble. He may become embarassed and chagrined; be may become shamefaced. ... Approved attributes and their relation to face make of every man his own jailer.* (5-10, emphasis in the original).

[12]The concept of an adjacency pair is obviously of greater generality than that of a speech act, and the relationship between the two ideas is very much a matter of interpretation, and by no means uncontroversial. The argument we are developing is not in fact restricted to a speech act interpretation of interaction in that it depends on an assumption

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of functional interdependence between pairs of statement, a notion that is equally applicable to an adjacency pair as to a speech act.

[13]Goffman has played on this ambiguity, notably in the introduction to his classic *The presentation of self in everyday life* (1959, 4-5), describing "Preedy" (a figure in a novel) and how he sets about creating the illusion of context and identity that will make him look interesting.

[14]This has been described by Watzlawick, Beavin & Jackson (1967) as the distinction between content and relationship. They emphasize, in my view correctly, the difficulty of getting at the relationship level, once it has been established. A further difficulty, as I see it, is that in bringing the presuppositional basis of the transaction into focus, a new buried implicit set of preconditions to speech has been created, and its relationships may be as problematical as those that were to be treated (Haley, 1976, 126-28).

[15]Cf. Atkinson (1981) on the culture of bedside teaching in a hospital: *Although the teaching takes place within the hospital ward, it is to some extent insulated from it, and although there is constant activity in the wards, it does not necessarily impinge on the bedside teaching as such. As it progresses, the teaching round seems almost completely isolated from the other goings-on in the ward. As the clinician and his students stop at each bed they form an 'ecological huddle'; as it moves round the ward forming and re-forming around each patient, the group is enclosed by a relatively impermeable 'membrane'.*

[16]Cf. Richards (1991): *The primary role of conversation is not communication; communication is secondary. Conversation is the converse of control; it supports the autonomy of the participants. The primary role of conversation is the maintenance, transformation, and creation of distinction. Conversation occurs between two or more organizationally closed individuals, where such individuals can be people, distinct roles in one person, or groups of people. These individuals are characterized by bundles of coherent concepts which continually produce themselves; associated with each concept is an image or description out of which distinctions are generated. Differences in images or descriptions from one individual to another make possible as many realities as there are individuals. The conceptualization processes should not be construed as occurring in the brain, although brains are certaintly important in these processes. Conceptualization is a social process.*

It will be noted that Richards sees the individual as also self-organizing. This is a position with which I agree, but it raises issues that go beyond the scope of this paper. I have already cited Varela on communication between self-organizing systems. For a slightly different perspective, see Baraldi (1993).

[17]It is obvious at this point that I am no longer reasoning within the bounds of Austin's theory of speech acts and, in particular, that I am taking up the branch I called "missing" in Figure 3. The views of Flores and Winograd (and particularly Flores, 1982) are rather close to those of Varela, whose reflections on self-organization also have a phenomenological edge. I am grateful to one of the anonymous reviewers of this essay for pointing out the very

considerable gap between the traditions of thought within which Austin and Heidegger are respectively located. There is not space to consider in detail why I call on such contrasting traditions, other than to observe again that Austin is useful in explaining how conversation may be thought of as reflexive, while what I am trying to develop now is a view of discourse as holistic, and for this purpose a more phenomenological approach is needed. A rather different way of getting at the same issue (namely the lack of conversational dynamic in Austin), with which I have worked, is to call on narrative theory, since again such a frame emphasizes the unfolding, and contingent, nature of the successive events making up a conversation.

[18]A very similar view has been espoused by Karl Weick (1969, 1977, 1979, 1985, 1988; Weick & Daft, 1983). Weick calls the construction of reality through communication *enactment*. Brunsson (1985) conceives of management behavior in this way of thinking as "action rationality" (Taylor & Van Every 1993, chapter 3).

[19]I am presently engaged in work, with L. Lerner, which aims to capture some of the properties which make a given conversation distinctive, in this instance a group of senior executives, engaged in a roundtable discussion that has now been going on for some three years.

[20]This is precisely the limitation of Austin's work (Taylor & Cooren, unpublished).

[21]While I, personally, subscribe to a view that sees organization as fundamentally self-organizing, I equally recognize that exchanges with the world outside are also better interpreted as informational for certain purposes. It is certainly true that the belief in an ill-defined concept circulating under the name of "information" (Taylor 1993, chapter 3) has been accorded an outrageously exaggerated credibility in our time and yet I would not want to throw away the idea altogether, since it seems to me difficult to deny, on the basis of intuition, that symbols and events are in fact informative as to the state of the world. The problem is that the other point of view has never been given its due, with consequences that I believe are unfortunate.

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